AMENDMENTS TO THE CLAIMS

Please amend claims 1, 3, 12, 14, 16, and 25, as follows:

1.   (Currently Amended) A method of optimizing a software program for a target processor to meet performance objectives, where the software program is coded in a high-level language, the method comprising the steps of:

(a)   optimizing the software program such that a resulting first optimized form of the software program is ~~substantially~~ at least partially independent of the target processor and is ~~substantially~~ at least partially coded in the high-level language;

(b)   optimizing the first optimized form of the software program such that a resulting second optimized form of the software program includes at least one portion that is ~~substantially~~ dependent on the target processor and is ~~substantially~~ coded in the high-level language~~,~~ ; and

(c)   flagging the ~~substantially dependent high-level language portion of the second optimized form; and~~ at least one portion to indicate that the at least one portion is dependent on the target processor

~~(c)   optimizing the second optimized form of the software program such that a resulting third optimized form of the software program is substantially dependent on the target processor and includes portions coded in a low-level language of the target processor.~~

2.   (Original) The method of claim 1, further comprising steps of:

(a1)   determining a first performance profile for the first optimized form of the software program, and comparing the first performance profile with the performance objectives; and

(b1)   determining a second performance profile for the second optimized form of the

software program, and comparing the second performance profile with the performance

objectives.

3.   (Currently Amended) The method of claim ~~2, wherein steps (b), (b1), and (c) are not~~

~~performed if the performance objectives are met after completing step (a), and step (c) is not~~

~~performed if the performance objectives are met after completing step (b)~~ 1, further comprising:

(d)   optimizing the second optimized form of the software program such that a

resulting third optimized form of the software program is at least partially dependent on the

target processor and includes portions coded in a low-level language of the target processor.

4.   (Previously Presented) The method of claim 1 in which step (a) comprises the act of

deriving a floating point implementation.

5.   (Previously Presented) The method of claim 1 in which step (a) comprises the act of

deriving a fixed point implementation.

6.   (Previously Presented) The method of claim 5 in which the act of deriving the fixed point

implementation comprises the act of processing qualification.

7.   (Previously Presented) The method of claim 5 in which the act of deriving the fixed point

implementation comprises the act of implementation sizing.

8.   (Previously Presented) The method of claim 1 in which step (a) comprises the act of implementing reference code.

9.   (Previously Presented) The method of claim 8 in which the act of implementing reference code comprises code profiling.

10.   (Previously Presented) The method of claim 1 in which step (b) comprises the act of optimization predicted to improve resulting assembly code.

11.   (Previously Presented) The method of claim 1 in which step (b) comprises the act of tuning low-level functions.

12.   (Currently Amended) The method of claim 1 3 in which step (e d) comprises the act of manual assembly optimization.

13.   (Previously Presented) The method of claim 1 in which step (b) comprises the act of feature tuning.

14.   (Currently Amended) A computer-readable medium comprising a sequence of instructions which, when executed by a processor, causes the processor to execute a method for optimizing a software program for a target processor to meet performance objectives, where the software program is coded in a high-level language, the method comprising the steps of:

(a)   optimizing the software program such that a resulting first optimized form of the software program is ~~substantially~~ at least partially independent of the target processor and is ~~substantially~~ at least partially coded in the high-level language;

(b)   optimizing the first optimized form of the software program such that a resulting second optimized form of the software program includes at least one portion that is ~~substantially~~ dependent on the target processor and is ~~substantially~~ coded in the high-level language~~;~~ ; and

(c)   flagging the ~~substantially dependent high-level language portion of the second optimized form; and~~ at least one portion to indicate that the at least one portion is dependent on the target processor

~~(c)   optimizing the second optimized form of the software program such that a resulting third optimized form of the software program is substantially dependent on the target processor and is includes portions coded in a low-level language of the target processor.~~

15.   (Previously Presented) The computer-readable medium of claim 14, in which the method further comprises the steps of:

(a1)   determining a first performance profile for the first optimized form of the software program, and comparing the first performance profile with the performance objectives; and

(b1)   determining a second performance profile for the second optimized form of the software program, and comparing the second performance profile with the performance objectives.

16.   (Currently Amended) The computer-readable medium of claim ~~15, wherein steps (b),~~ ~~(b1), and (c) are not performed if the performance objectives are met after completing step (a),~~ ~~and step (c) is not performed if the performance objectives are met after completing step (b)~~ 14, wherein the method further comprises:

(d)   optimizing the second optimized form of the software program such that a resulting third optimized form of the software program is at least partially dependent on the target processor and is includes portions coded in a low-level language of the target processor.

17.   (Previously Presented) The computer-readable medium of claim 14 in which step (a) comprises the act of deriving a floating point implementation.

18.   (Previously Presented) The computer-readable medium of claim 14 in which step (a) comprises the act of deriving a fixed point implementation.

19.   (Previously Presented) The computer-readable medium of claim 18 in which the act of deriving the fixed point implementation comprises the act of processing qualification.

20.   (Previously Presented) The computer-readable medium of claim 18 in which the act of deriving the fixed point implementation comprises the act of implementation sizing.

21.   (Previously Presented) The computer-readable medium of claim 14 in which step (a) comprises the act of implementing reference code.

22.   (Previously Presented) The computer-readable medium of claim 21 in which the act of implementing reference code comprises code profiling.

23.   (Previously Presented) The computer-readable medium of claim 14 in which step (b) comprises the act of optimization predicted to improve resulting assembly code.

24.   (Previously Presented) The computer-readable medium of claim 14 in which step (b) comprises the act of tuning low-level functions.

25.   (Currently Amended) The computer-readable medium of claim ~~14~~ 16 in which step (e d) comprises the act of manual assembly optimization.

26.   (Previously Presented) The computer-readable medium of claim 14 in which step (b) comprises the act of feature tuning.